

**Claims:**

1. A method of allocating bandwidth over a cable network for a packet-switched telephony connection between two endpoints, said method comprising the steps of:

authorizing and reserving an allocation of bandwidth at the time of a call origination sufficient to establish a voice-band data connection between the endpoints; and

committing only a portion of the allocation of bandwidth sufficient to establish a compressed voice traffic connection between the endpoints, wherein the committed portion of the allocation is a subset of the reserved allocation of bandwidth.

2. The method of claim 1 further comprising the step of releasing the reserved but uncommitted portion of the allocation of bandwidth so that it is available for another connection if at least one of the endpoints determines that the connection is to support voice traffic and not voice-band data.

3. The method of claim 2 wherein the releasing step is performed after a prescribed period of time has elapsed since establishment of a full send/receive connection without detection of voice-band data.

4. The method of claim 3 wherein said prescribed period of time is sufficient to detect voice-band data.

5. The method of claim 1 further comprising the step of committing the reserved but uncommitted bandwidth without any further authorization if at least one of the endpoints determines that the connection is to support voice-band data.

6. The method of claim 1 further comprising the steps of: negotiating between the endpoints support for a high-rate codec and a low-rate codec; and, initially employing the low-rate codec for the compressed voice traffic connection.

7. The method of claim 5 further comprising the steps of: negotiating between the endpoints support for a high-rate codec and a low-rate codec; and, initially employing the low-rate codec for the compressed voice traffic connection.

8. The method of claim 7 further comprising the step of employing the high-rate codec for the voice-band data.

9. The method of claim 2 further comprising the step of committing the reserved but uncommitted bandwidth by notifying a Call Agent associated with the cable network if voice-band data is detected after performing the step of releasing the additional bandwidth.

10. The method of claim 9 further comprising the step of stipulating to the endpoints a particular high-rate codec for the voice-band data.

11. The method of claim 1 wherein the authorizing step is performed by a Call Agent associated with the cable network.

12. The method of claim 1 wherein at least one of the endpoints is an MTA.

13. The method of claim 1 wherein the cable network is an HFC cable network.

14. The method of claim 1 wherein the reserved but uncommitted portion of the bandwidth can be used for traffic assigned best-effort prioritization.

15. The method of claim 5 wherein a determination that the connection is to support voice-band data is made by detecting a tone from a voice-band data device.